

Mail Stop 3561

October 15, 2009

Mr. Bruce Nelson
Chief Financial Officer
Global Clean Energy Holdings, Inc
6033 W. Century Blvd, Suite 895
Los Angeles, CA 90045

**Re: Global Clean Energy Holdings, Inc
Form 10-K for the Fiscal Year Ended December 31, 2008
Filed April 15, 2009 and
Supplemental response filed September 16, 2009
File No. 000-12627**

Dear Mr. Nelson:

We have reviewed your filings and supplemental response and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the Fiscal Year Ended December 31, 2008

Report of Independent Registered Public Accounting Firm, page F-2

1. We note your response to our prior comment one of our letter dated August 12, 2009 stating that you will mark the cumulative information as unaudited and amend the 10-K. Please provide us the revised audit report and the financial statements before you file the amendment.

Notes to Consolidated Financial Statements

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Note A- Organization and Significant Accounting Policies
Principles of Consolidation, page F-8

2. We note your response to our prior comment two and three stating that GCE Mexico and Asideros are variable interest entities and you are the primary beneficiary. As GCE Mexico is not consolidated, please disclose if GCE Mexico had any liabilities, contingent liabilities, or assets subject to lien, and the approximate amounts. Please revise to disclose how you accounted for your investments in GCE Mexico and Asideros and your basis for your accounting treatment.

Exhibits

3. As previously requested, please file the operating agreements of GCE Mexico and Charter and By-Laws of Asideros as Exhibits. Upon reviewing the agreements, we may have further comments.

As appropriate, please amend your filing and respond to these comments within 10 business days or tell us when you will provide us with a response. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

You may contact Raj Rajan at (202) 551-3388 or Nasreen Mohammed at (202) 551- 3773 if you have questions regarding comments on the financial statements and related matters.

Sincerely,

Tia Jenkins
Senior Assistant Chief Accountant
Office of Beverages, Apparel and
Health Care Services